

Neolamprologus longicaudatus, a New Cichlid Fish from the Zairean Coast of Lake Tanganyika

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Abstract A new cichlid, *Neolamprologus longicaudatus* sp. nov. is described, based on three specimens from the north Zairean coast of Lake Tanganyika. Although similar to *N. furcifer*, *N. christyi* and *N. buescheri* in having an elongate body, strongly emarginate caudal fin, and vertical fins partly covered with scales, this species is distinguishable from them by its small orbit, light grayish-brown coloration of body, dorsal fin lacking a submarginal dark band, 37 longitudinal body scales, 8 gill rakers on lower limb of the 1st gill arch, and a long pointed snout.

Neolamprologus is a genus of the family Cichlidae in Lake Tanganyika, one of the Great Rift Valley lakes in the central east Africa. Lake Tanganyika is famous for its remarkable endemism seen in the cichlid fishes, and the genus *Neolamprologus* is also endemic to the lake. *Neolamprologus* is the largest genus among Lake Tanganyikan cichlids, and 42 species are presently known from the lake (Büscher, 1991, 1992a, 1992b, 1993; Marechal and Poll, 1991). Some of these species are widely distributed throughout the lake, but many species have been reported from limited areas, suggesting localized geographical distributions.

The genus *Neolamprologus* is characterized by less than 60 longitudinal ctenoid scales on the body, the 1st soft ray of pelvic fin being longest, 18–20 dorsal fin spines, 5–7 anal fin spines, 6–8 canine teeth on the upper jaw, and conical inner teeth on both jaws (Poll, 1986).

During a scientific expedition to the Ubwari Peninsula on the northern Zairean coast, one of the authors (MMG) collected specimens of an undescribed species of *Neolamprologus* from depths of 12–15 m. It is here described as *Neolamprologus longicaudatus* sp. nov.

Methods of counts and measurements mainly followed Hubbs and Lagler (1958), and counts of dorsal and anal fin rays were those of Trewavas (1983).

Neolamprologus longicaudatus sp. nov. (Figs. 1, 2)

Neolamprologus sp. "Kavalla" Konings and Dieckhoff, 1992: 150, fig. (Milima Island, Zaire).

Holotype. HUMZ (Laboratory of Marine Zoology, Faculty of Fisheries, Hokkaido University) 127670, 85.5 mm in standard length (SL), Cape Banza, Ubwari Peninsula, Zaire, 15 m depth, gill net, Sept. 30, 1993.

Paratypes. CRHU (Centre de Recherche en Hydrobiologie, Uvira, Zaire) 1993.0001, 82.3 mm SL, same data as holotype; HUMZ 127692, 69.0 mm SL, Cape Banza, Ubwari Peninsula, Zaire, 12 m depth, gill net, Sept. 29, 1993.

Diagnosis. This new species is distinguishable from other species of the genus by the following combination of characters: generally light grayish brown body, without conspicuous markings; whitish ventral surface of head and thoracic region; vertical fins with many small dark brownish spots; elongate body (depth 3.57–3.89 times in standard length); long pointed snout (length 2.5–3 in head length); 8 gill rakers on lower limb of 1st gill arch; 37 longitudinal scales on body; dorsal and anal fin bases partly covered by scales; strongly emarginate caudal fin, with filamentous upper and lower principal rays.

Description. Counts and measurements are shown in Table 1. Body elongate; depth less than

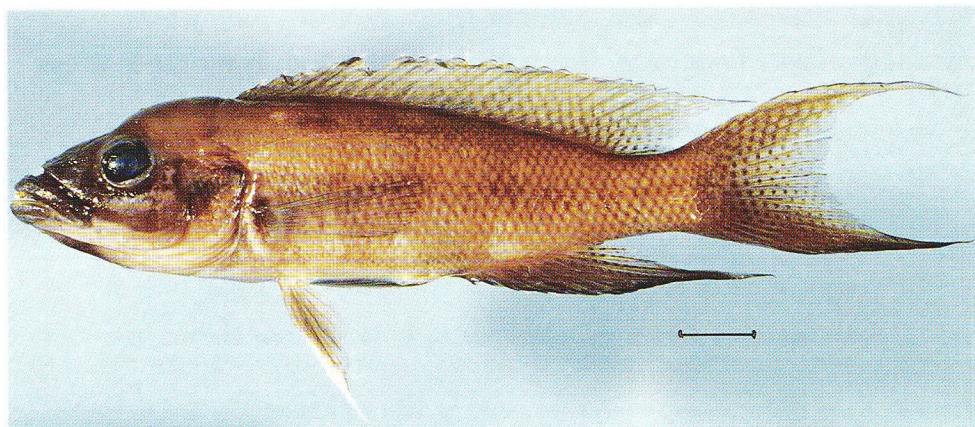


Fig. 1. Holotype of *Neolamprologus longicaudatus* sp. nov. from Cape Banza, Ubwari Peninsula, Zaire. HUMZ 127670, 85.5 mm SL. This photograph was taken two days after preservation in formalin. Scale bar indicates 10 mm. (Photograph by Tetsumi Takahashi).

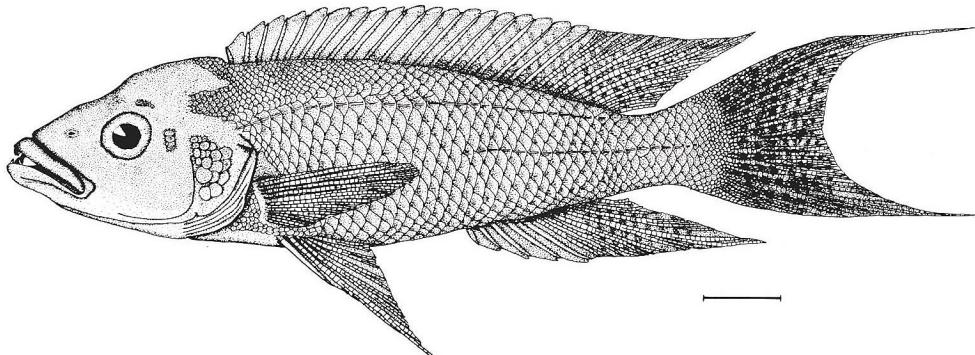


Fig. 2. Holotype of *Neolamprologus longicaudatus* sp. nov. HUMZ 127670, 85.5 mm SL. Scale bar indicates 10 mm.

head length, highest at occiput in holotype and larger paratype specimens. Dorsal profile of head almost straight, but slightly concave above eye in holotype and larger paratype. Occiput swollen in larger specimens. Snout long and pointed; length larger than eye diameter, nearly 2 times in larger specimens, 1.2 times in smaller paratype. Interorbital region broadly rounded. Mouth terminal, lower jaw projecting slightly beyond upper jaw; upper jaw not reaching level of anterior margin of eye in larger specimens, extending beyond level in smaller paratype. Eye relatively small. Suborbital narrow, width much less than eye diameter.

Dorsal fin larger posteriorly, 1st dorsal spine very short, spine length progressively increasing posteriorly to 6th or 7th spines, 5th soft ray extending to middle of caudal fin. Anal fin spines longer posteriorly, 4th soft ray extending to middle of caudal fin.

Pectoral fin extending a little beyond anus. First pelvic soft ray longest, extending beyond anal origin to 3rd anal fin spine base. Caudal fin strongly emarginate, upper- and lower-most principal rays extremely elongated and filamentous.

Four canine teeth present anteriorly on upper and lower jaws, outer two teeth larger; a single series of large conical teeth along outer side of jaws; inner teeth small, conical, in many rows.

Scales on body weakly ctenoid, smaller and rather irregular in arrangement between upper lateral line and spinous dorsal fin base. Cheek with very few scales. Opercle scaly. Nape naked, occiput with many small scales. Thoracic region scaled at pectoral and pelvic bases, naked between. Soft dorsal fin, posterior part of spinous dorsal fin, and anal fin scaled at bases. Caudal fin scaled nearly to posterior margin of the fin.

Gill rakers short, stout.

Color in alcohol.—Ground color of head and body light brownish or light grayish-brown. Snout, upper jaw and dorsal surface of head darker. Lower jaw, lower part of opercular region, branchiostegal membrane and thoracic region whitish. Dorsal fin and upper half of caudal fin paler than anal fin and lower half of caudal fin. Dorsal fin membrane blackish marginally. Dorsal, anal and caudal fins with many small dark brownish spots. Pelvic fin dark, but the longest 1st soft ray whitish.

Distribution. Lake Tanganyika along north and middle Zairean coast (Fig. 3, Cape Banza and Ka-

valla Islands). In depths exceeding 12 m.

Etymology. The species name, *longicaudatus*, is derived from the Latin *longi* for long and *caudatus* for tail, in reference to having a very long filamentous caudal fin.

Remarks. The present new species conforms well to the definition of *Neolamprologus* given by Poll (1986), except for the number of canine teeth on the upper jaw. The type specimens have 4 canine teeth on the upper jaw, whereas Poll (1986) considered *Neolamprologus* as having 6–8 canine teeth. However, the teeth are more variable within the genus,

Table 1. Counts and measurements of *Neolamprologus longicaudatus* sp. nov. from Lake Tanganyika

	Holotype	Paratypes	
	HUMZ 127670	CRHU 1993.0001	HUMZ 127692
Standard length (SL, in mm)	85.5	82.3	69.0
Counts			
Dorsal fin rays	XX, 9	XX, 10	XX, 9
Anal fin rays	V, 7	VI, 7	VI, 7
Pectoral fin rays	14	14	13
Pelvic fin rays	I, 5	I, 5	I, 5
Caudal fin rays	10	10	10
Longitudinal scales	37	37	37
Upper lateral line scales	29	27	27
Lower lateral line scales	18	16	15
Scales below lateral line	13	13	12
Gill rakers	4+8	3+8	3+8
Canine teeth (Upper jaw)	4	4	4
Canine teeth (Lower jaw)	4	4	4
Vertebrae	34	34	34
Measurements (% SL)			
Body depth	28.0	27.1	25.7
Head length	34.7	34.9	33.9
Snout length	14.2	13.6	11.3
Orbital length	9.2	9.0	9.7
Interorbital width	9.9	10.1	8.4
Eye diameter	7.7	8.0	9.3
Suborbital width	4.7	5.1	5.4
Upper jaw length	13.9	14.2	13.8
Longest dorsal spine	13.3	13.6	13.0
Longest dorsal softray	26.9	27.1	27.5
Longest anal spine	12.9	13.4	16.7
Longest anal softray	33.0	35.8	26.5
Longest pectoral ray	24.6	24.3	25.4
Longest pelvic ray	33.9	33.5	31.3
Dorsal fin base length	55.6	56.0	54.4
Anal fin base length	17.5	19.4	19.4
Caudal peduncle length	20.2	19.0	19.1
Caudal peduncle depth	11.9	11.9	10.7

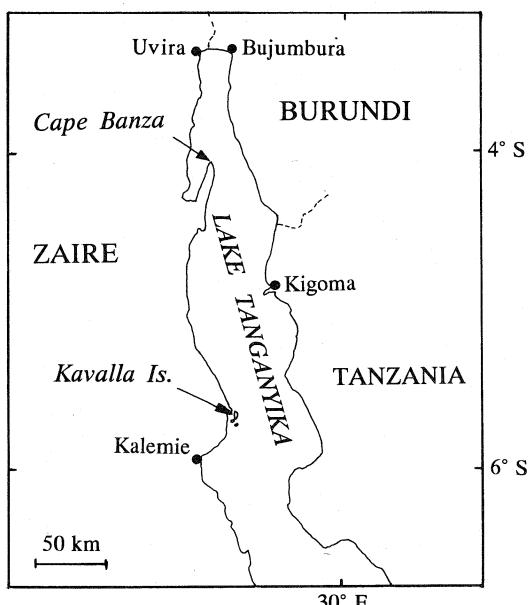


Fig. 3. Northern part of Lake Tanganyika, showing type locality and known distribution of *Neolamprologus longicaudatus* sp. nov.

and according to our unpublished data, for example, some specimens of *Neolamprologus toae* have 10 canine teeth. As all the other characters of present new species are clearly those of *Neolamprologus*, this difference in number of canine teeth is not important for generic assignment.

Neolamprologus longicaudatus sp. nov. is characterized by an elongate body, partly-scaled bases of the dorsal and anal fins, and a strongly emarginate caudal fin with filamentous upper and lower principal rays. Such features are also characteristic of *N. furcifer* (Boulenger, 1898), *N. christyi* (Trewavas and Poll, 1952) and *N. buescheri* (Staeck, 1983). However, this new species can be easily distinguished from *N. furcifer* by its small orbit, length of which is much shorter than snout length (almost equal in *N. furcifer*), broader interorbital which is equal to or larger than eye diameter (much less), lighter body coloration (dark), and 8 gill rakers on the lower limb of 1st gill arch (16 gill rakers) (Boulenger, 1898). It is distinguishable from *N. christyi* by having 37 longitudinal body scales (50–60 scales in *N. christyi*), and a more pointed snout (obtuse) (Trewavas and Poll, 1952). *N. buescheri* has a conspicuous broad, black, submarginal longitudinal band along the dorsal fin (Staeck, 1983: 327), but present new species lacks such a submarginal band on the fin.

Konings and Dieckhoff (1992: 150) gave a photograph of present new species, taken at Milima Island, Zaire.

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アフリカ・タンガニーカ湖の北部ザイル沿岸から採集されたカワスズメ科の1新種 *Neolamprologus longicaudatus*

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アフリカ・タンガニーカ湖のザイル国北部に位置するウブリ半島先端より採集された3個体の標本に基づいて、カワスズメ科の新種 *Neolamprologus longicaudatus* を記載した。本種は体が細長く、尾鰭が湾入りし、さらに上下の主鰭条が延長するなどの特徴で *N. furcifer*, *N. christyi* および *N. buescheri* に似るが、体がほぼ一様な灰褐色で、背鰭、臀鰭および尾鰭に黒褐色の小斑点が並ぶこと、頭部腹面が白いこと、背鰭の縁近くに黒色線がないこと、縦列鱗数が37枚であること、第1鰓弓の下枝鰓耙数が8本であること、吻が尖ることなどでこれら3種と識別される。

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